

TITLE: SCOOTER FOLDING STRUCTURE

Field of the Invention

This invention relates to a scooter, and more particularly to a scooter having a folding structure.

5 Background of the Invention

There are various types of scooter on the market. They are popular to users due to their mobility and they are foldable for easy carriage. The folding structure of current products is generally composed of an upper unit and a lower unit secured by a locating fastener. The locating fastener is easy to be loosened when hit by a foreign object.

- 10 Therefore, a new folding structure has been derived, which uses a pulling spring to secure the structure and to adjust the upper unit and the lower unit to fold the product. However, sometimes the spring may get stuck and clip the user's finger to cause an accident.

Summary of the Invention

- 15 It is the primary advantage of the present invention to provide a scooter folding structure, which is easy to operate.

It is another advantage of the present invention to provide a scooter folding structure, which is safe in operation.

Brief Description of the Drawings

- 20 FIG. 1 is a side view of the present invention;
FIG. 2 is an exploded view of the present invention;
FIG. 3 is an enlarged partial cross-sectional view of the folding structure of the present invention;
FIG. 4 is an enlarged view of the connecting part of the present invention, and
25 FIG. 5 is sectional view of the present invention in a folding status.

Detailed Description of the Preferred Embodiment

The present invention, as shown in Figures 1 and 2, comprises a handle tube 1, a skateboard 2, and a fastener device 3.

5 The handle tube 1 includes a handle 11 secured on the top end, a roller 12 at the bottom end, and a strut 13 extending from the lower portion in a slanting way. The strut 13 has a base 131 vertically formed at one end thereof with a ridge 132 extending from the bottom end of the base 131. The base 131 further comprises a pair of through holes 133 and a boss 134 protruding from the top end thereof.

10 The skateboard 2 has a roller 21 secured to the rear end, and an arc connecting block 22 at the front end thereof. The connecting block 22 comprises a pair of connecting parts 23 and 24 at a 90-degree angle to each other. The connecting part 23 has a position hole 231, and the connecting part 24 has a position hole 241. The connecting block 22 further comprises a locating hole 25 and a pair of locating studs 26 and 27 on one side thereof.

15 The fastener device 3 includes a rod 31, a knob 32 and a spring 33. The rod 31 has an enlarged section 311 at the lower portion. When the spring 3 is sleeved onto the rod 31 from the top of the rod 31, the spring 3 will be stopped by the enlarged section 311. The rod 31 further comprises a threaded section 312 underneath the enlarged section 311 and an engaging tip 313 at the bottom. The top end of the rod 31 is provided with a threaded hole 314 adapted to secure the knob 32 with a bolt 34.
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To assemble the present invention, as shown in FIG. 3, the spring 3 is sleeved onto the rod 31 and then slid into the boss 134 of the base 131 from the bottom towards the top direction so that the top portion of the rod 31 will be extended outwardly from the boss 134. The knob 32 is placed on the top of the rod 31. The bolt 34 is inserted and
25 threaded with the threaded hole 314 of the rod 31. This secures the knob 32 and the rod 31 to the boss 134 of the base 131. The base 131 of the handle tube 1 is placed onto the connecting block 22 with the through holes 133 aligned with the locating hole 25 of the connecting block 22, and then a bolt 4 is inserted from one side and secured

with a nut 5 from the other side thereof. The engaging tip 313 of the rod 31 is inserted into the position hole 231 of the connecting part 23, and the threaded section 312 of the rod 31 is threaded to the position hole 231 of the connecting part 23. The handle tube 1 is securely fastened to the skateboard 2 in a straight position with respect to the skateboard 2. The ridge 132 of the base 131 is engaged with the locating stud 26, which provides a stable assistant to the handle tube 1.

To fold the present invention, as shown in FIG. 4, the knob 32 is rotated to release the threaded section 312 of the rod 31 from the position hole 231 of the connecting part 23. The knob 32 is pulled upwardly to bring the engaging tip 313 away from the position hole 231 and the handle tube 1 is free to move. The handle tube 1 is pushed downward until the engaging tip 313 has reached the position hole 241 of the connecting part 24. The spring 33 will urge the rod 31 downward, and then the threaded section 312 of the rod 31 is threaded to the position hole 241 of the connecting part 24 to hold the rod 31 securely in the position hole 241. The ridge 132 of the base 131 engages with the locating stud 27. The handle tube 1 is fastened securely.